

Difenoconazole  
PC Code: 128847

Dietary Exposure Assessment

DP#: 371613



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**WASHINGTON, D.C. 20460**

OPP OFFICIAL RECORD  
HEALTH EFFECTS DIVISION  
SCIENTIFIC DATA REVIEWS  
EPA SERIES 361

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

**MEMORANDUM**

Date: 21-Jan-2010

Subject: **Difenoconazole.** Acute and Chronic Aggregate Dietary Exposure and Risk Assessments for the Section 3 Registration Request for Mango and Wax Apple.

PC Code: 128847	DP Barcode: 371613
Decision No.: 413927	Registration No.: None
Petition Nos.: 9E7573	Regulatory Action: Section 3
Assessment Type: Single Chemical, Dietary	Registration Case No.: NA
TXR No.: None	CAS No.: 119446-68-3
MRID No.: None	40 CFR: 180.475

Reviewer: Thurston G. Morton, Chemist *[Signature]*  
Risk Assessment Branch IV/Health Effects Division (RABIV/HED; 7509P)

Through: Doug Dotson, PhD., Chemist *D. Dotson*  
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*Received in RPP  
2/14/2018  
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## Executive Summary

Aggregate (food + water) acute and chronic dietary risk assessments were conducted using the Dietary Exposure Evaluation Model - Food Consumption Intake Database (DEEM-FCID™, ver. 2.03). This model uses food consumption data from the United States Department of Agriculture's (USDA's) Continuing Surveys of Food Intakes by Individuals (CSFII; 1994-1996 and 1998). The analyses were performed to support a Section 3 request for new uses of the fungicide difenoconazole [1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1*H*-1,2,4-triazole] in/on mango and wax apple.

The unrefined acute analysis assumed tolerance-level residues, 100% crop treated (CT), and the available empirical or DEEM™ (ver. 7.81) default processing factors. The resulting acute food exposure estimates were less than HED's level of concern (<100% of the acute population-adjusted dose (aPAD)) at the 95<sup>th</sup> percentile of the exposure distribution for the general U.S. population (7 % aPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 16 % aPAD. The somewhat refined chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, the available empirical or DEEM™ (ver. 7.81) default processing factors, and 100 % CT. The resulting chronic food exposure estimates were less than HED's level of concern (<100% of the chronic population-adjusted dose (cPAD)) for the general U.S. population (17 % cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 45 % cPAD.

**The requested uses of difenoconazole did not result in an increase in dietary exposure estimates for free triazole or conjugated triazoles. Therefore, the last dietary exposure analyses for the triazole metabolites (M. Negussie, 28 Oct. 2009) have not changed.**

## I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the PAD. The PAD is equivalent to the point of departure (POD, NOAEL, LOAEL, e.g.) divided by the required uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. HED is generally concerned when estimated cancer risk exceeds one in one million. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: <http://www.epa.gov/fedrgstr/EPA-PEST/2000/July/Day-12/6061.pdf>; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for difenoconazole was conducted by T. Morton (22-September-2009; DP#367383).

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## II. Residue Information

Difenoconazole tolerances are published in 40 CFR§180.475.

**Residues of Concern in Plants and Livestock:** The HED Metabolism Assessment Review Committee (MARC) has determined that for tolerance expression and risk assessment purposes, the residue of concern is difenoconazole *per se* for plant and livestock commodities. The MARC, however, stated that if tolerances are proposed for difenoconazole resulting from foliar uses which result in higher residue levels of CGA-205375 than parent, then the need to include CGA-205375 should be reconsidered (Memo, G. Kramer, 22-JUL-1994; No DP#). Because the petitioner has now proposed foliar uses of difenoconazole, which result in higher residues in crop commodities, the need to include metabolite CGA 205375 in the tolerance expression and/or risk assessment has been re-examined. Based upon a review of the previously-submitted metabolism data for difenoconazole, HED concludes the residue of concern for both tolerance setting and risk assessment for the crops included in this petition is difenoconazole. However, HED concludes the residue of concern in livestock for tolerance setting and risk assessment are difenoconazole and its metabolite CGA 205375 (for more details, see the summary document, DP# 340379). Table 1 below summarizes tolerance expression and the residues of concern in plant and livestock commodities.

**Table 1. Difenoconazole Residues of Concern in Plants and Ruminants.**

Matrix		Residues of Concern	
		For Risk Assessment	For Tolerance Expression
Plants	Primary and Rotational crops	Parent Only	Parent Only
Livestock	Ruminant and Poultry	Parent and CGA 205375	Parent and CGA 205375
Drinking Water		Parent Only	NA

**Recommended Tolerances:** Based on the residue chemistry data submitted with the current petitions, HED recommended for establishment of the new food tolerances (DP# 366507, B. Cropp-Kohllgian, 21-Jan-2010). The recommended, established, and revised tolerances are listed in Table 2 below.

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**Table 2. Tolerance Summary for Difenoconazole.**

Commodity	Existing/Established Tolerances (ppm)	New Recommended Tolerances (ppm)
Almond, nutmeat <sup>1</sup>	0.05	0.03 tree nut
Almond, hulls <sup>1</sup>	5.0	7.0
Brassica subgroup 5A	none	1.9
Brassica subgroup 5B	none	35
Citrus, dried pulp	none	2.5
Citrus oil	none	25
Fruit, citrus, group 10	none	0.6
Grape	0.1	4.0
Grape, raisin	none	6.0
Nut, tree, group 14	none	0.03
Onion, bulb, subgroup 3—07A	none	0.20
Onion, green, subgroup 3—07B	none	6.0
Pistachios	none	0.03
Vegetable, cucurbit, group 9 <sup>1</sup>	1.0 individual RACs	0.7
Fruit, Pome, group 11	1.0	-----
Vegetable, Fruiting, Group 8	0.60	-----
Vegetable, Tuberous and Corm, subgroup 1C	0.01	-----
Beet, sugar <sup>2</sup>	0.30	-----
Papaya	0.30	-----
Apple, wet pomace	4.5	-----
Beet, sugar, dried pulp	1.9	-----
Potato, processed waste	0.04	-----
Banana	0.2	-----
Barley, grain	0.1	-----
Barley, hay	0.05	-----
Barley, straw	0.05	-----
Canola, seed	0.01	-----
Cattle fat	0.10	-----
Cattle, meat	0.05	-----
Cattle, meat byproducts	0.10	-----
Cattle, liver	0.20	-----
Corn, sweet, forage	0.01	-----
Corn, sweet, kernel plus cob with husks removed	0.01	-----
Corn, sweet, stover	0.01	-----
Cotton, gin byproducts	0.05	-----
Cotton, undelinted seed	0.05	-----
Egg <sup>3</sup>	0.10	-----
Goat, fat	0.10	-----
Goat, meat	0.05	-----
Goat, meat byproducts (except)	0.10	-----

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**Table 2. Tolerance Summary for Difenoconazole.**

Commodity	Existing/Established Tolerances (ppm)	New Recommended Tolerances (ppm)
(liver)		
Goat, liver	0.20	-----
Hog, fat	0.10	-----
Hog, meat	0.05	-----
Hog, meat byproducts (except liver)	0.1	-----
Hog, liver	0.20	-----
Horse, fat	0.10	-----
Horse, meat	0.05	-----
Horse, meat byproducts (except liver)	0.10	-----
Horse, liver	0.20	-----
Milk	0.01	-----
Rye, grain	0.1	-----
Sheep, fat	0.10	-----
Sheep, meat	0.05	-----
Sheep, meat byproducts (except liver)	0.10	-----
Sheep, liver	0.20	-----
Wheat, forage	0.1	-----
Wheat, grain	0.1	-----
Wheat, straw	0.1	-----
Wax apple	None	0.07
Mango	None	0.07

<sup>1</sup> Section 18 emergency exemption tolerance.<sup>2</sup> The registered tolerance on sugar beet (0.01 ppm) needs to be changed to 0.3 ppm; see "Notes to RD" in memorandum: M. Sahafeyan, D351715, 07-MAY-08.<sup>3</sup> Based on a feeding study, HED recommended the tolerances for poultry commodities (except egg) be removed and the egg tolerance be increased to the current level of 0.1 ppm.

**The requested uses of difenoconazole did not result in an increase in dietary exposure estimates for free triazole or conjugated triazoles. Therefore, the last dietary exposure analyses for the triazole metabolites (M. Negussie, 28 Oct. 2009) have not changed.**

**Food Residues and processing factors used in the Acute and Chronic Analysis:** The acute analysis assumed tolerance-level residues and 100% CT for all the registered and proposed crops. Tolerance-level residues were also assumed for all livestock tissues in this assessment. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, and 100 % CT. Those commodities where field trial data were used are summarized below. HED SOP 2000.1 *Guidance for Translation of Field Trial Data from Representative Commodities in the Crop Group Regulation to Other Commodities in Each Crop Group/Subgroup* dated 9/12/2000 was used in translating to other commodities in the crop group. Experimental processing factors were used for apple juice (0.04x), grape juice (0.2x), citrus juices (0.1x), potato chips (0.5x), potato granules/flakes (0.5x),

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raisin (3.5x chronic only), sugar beet molasses (0.6x), tomato paste (1.6x), and tomato puree (0.5x); DEEM™ (ver. 7.81) default processing factors were assumed for other processed commodities.

**No free triazole or conjugated triazole residue data were submitted with the mango residue field trial submission. However, current dietary exposure estimates are conservative enough that submission of this residue data on mango is not expected to result in an increase in aggregate exposure.**

Almond: Field trial residues were used from MRID 47586101.

Apple: Field trial residues were used from MRID 46950233.

Broccoli: Field trial residues were used from MRID 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs.

Cabbage: Field trial residues were used from 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs. To refine the dietary exposure data from only cabbage samples without wrapper leaves were used.

Cantaloupe: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHI.

Cucumber: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHI.

Grape: Field trial residues were used from MRID 47586105.

Grapefruit: Field trial residues were used from MRID 47586104.

Leaf Lettuce: Field trial residues were used from MRIDs 47417703 and 47417706.

Lemon: Field trial residues were used from MRID 47586104.

Lime: Field trial residues were used from MRID 47586104.

Mustard Greens: Field trial residues were used from MRIDs 47417704, 47417707, and 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs.

Orange: Field trial residues were used from MRID 47586104.

Pear: Field trial residues were used from MRID 46950233.

Pecan: Field trial residues were used from MRID 47586106.

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Peppers: Field trial residues were used from MRID 46950234.

Potato: Field trial residues were used from MRID 46950235.

Sugar Beet: Field trial residues were used from MRID 46950236.

Summer Squash: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHIs.

Tomato: Field trial residues were used from MRIDs 46950234, 47417705, and 47417708.

### III. Drinking Water Data

The drinking water estimates used in the dietary risk assessment were provided by the Environmental Fate and Effects Division (EFED; Memo, I. Maher, 28-MAY-2009; D361398). EFED conducted a Tier II drinking water assessment for surface water sources using the Pesticide Root Zone/Exposure Analysis Modeling System (PRZM/EXAMS) for the registered and proposed new uses. Among all the registered and proposed new uses, the highest estimated drinking water concentrations (EDWCs) for surface water sources were derived for aerial applications of difenoconazole to New York grapes at the maximum annual application rate of 0.46 lb ai/acre. The estimated drinking water residues for 1-in-10 year annual peak, 1-in-10 year annual mean, and 36-year annual mean are 15.8, 10.4, and 7.62 µg/L (ppb) respectively.

The highest SCI-GROW estimated drinking water concentration of difenoconazole from shallow ground water sources is  $1.23 \times 10^{-2}$  µg/L derived for the maximum proposed application rate to citrus fruit (0.50 lb ai/A), i.e. agricultural uses. Based on the previous drinking water assessment, this estimate is lower than an estimate for non-agricultural uses of  $1.28 \times 10^{-2}$  µg/L, obtained for the maximum application rate for ornamentals (0.52 lb ai/A; D333319). These concentrations can be considered as both the acute and chronic groundwater values.

The 1-in-10 year annual peak EDWC of 15.8 µg/L (ppb) was used for the acute dietary exposure analysis and the 1-in-10 year annual mean EDWC of 10.4 µg/L (ppb) was used for the chronic dietary exposure analysis.

### IV. DEEM-FCID™ Program and Consumption Information

Difenoconazole acute and chronic dietary exposure assessments were conducted using the DEEM-FCID™ (ver. 2.03), which incorporates consumption data from USDA's CSFII (1994-1996 and 1998). The 1994-96, 98 data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g., apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups, but for acute exposure assessment are retained as individual consumption events. Based on analysis of the 1994-96, 98 CSFII consumption data, which took into account dietary patterns and survey

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respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50+ years old.

For chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (*e.g.*, orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form. The resulting residue consumption estimate for each food/food form is summed with the residue consumption estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For acute exposure assessments, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or “matched” in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (*i.e.*, those who reported eating relevant commodities/food forms) and a per-capita (*i.e.*, those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for all tiers of analysis. However, for Tiers 1 and 2, significant differences in user vs. per capita exposure and risk are identified and noted in the risk assessment.

## V. Toxicological Information

On 08-SEP-1998, HED’s Hazard Identification Assessment Review Committee (HIARC) evaluated the toxicology database of difenoconazole and re-assessed the RfD established in 1994, as well as the toxicological endpoints for the dietary and occupational exposure risk assessments that were selected in 1994. At this meeting, the HIARC also addressed the potential enhanced sensitivity of infants and children from exposure to difenoconazole as required by the Food Quality Protection Act (FQPA) of 1996 (HED Doc. No. 012873, 25-SEP-1998). In July, 2007, the RAB1 toxicologists and risk assessment team met to reevaluate the endpoints selected by the HIARC since new studies were submitted. RAB1 toxicologists and risk assessment team also reevaluated FQPA assessments. The risk assessment team concluded that the default 10x FQPA Safety Factor (SF) should be reduced to 1x when assessing acute and chronic dietary exposures (M.Sahafeyan, D333320, 09-AUG-07). The relevant endpoints are shown in Table 3.

For purposes of this action, HED recently reviewed HED’s 27-JUL-1994 Cancer Peer Review Committee (CPRC) report (Memo, Jess Rowland and Esther Rinde) on difenoconazole and the supporting data-evaluation records (DERs). HED concluded that difenoconazole is a very weak carcinogen, showing effects only at excessive doses. In retrospect, the CPRC should have classified this pesticide as a category C with no linear quantification of cancer risk. The cRfD, based on borderline liver effects in male rats at 24.1 mg/kg and a NOAEL of 0.96 mg/kg, is protective of any carcinogenic effects seen in the mouse (Memo, S. Levy *et al.*, 05-AUG-2005;

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DP# 319944). Therefore, a separate cancer dietary assessment is not being conducted for difenoconazole.

**Table 3. Summary of Toxicological Doses and Endpoints for Difenoconazole for Use in Dietary Risk Assessments.**

Exposure Scenario	Point of Departure	Uncertainty/FQPA Safety Factors	RfD, PAD, for Risk Assessment	Study and Relevant Toxicological Effects
Acute Dietary (All populations)	NOAEL = 25 mg/kg	UF <sub>A</sub> = 10X UF <sub>H</sub> = 10X FQPA SF = 1X	aRfD = aPAD = 0.25 mg/kg/day	Acute Neurotoxicity Study in Rats LOAEL= 200 mg/kg in males based on reduced fore-limb grip strength in males on day 1.
Chronic Dietary (All populations)	NOAEL = 0.96 mg/kg/day	UF <sub>A</sub> = 10X UF <sub>H</sub> = 10X FQPA SF = 1X	cRfD = cPAD = 0.01mg/kg/day	Combined chronic toxicity/carcinogenicity (rat; dietary) LOAEL = 24.1/32.8 mg/kg/day (M/F) based on cumulative decreases in body-weight gains.
Cancer (oral, dermal, inhalation)	Difenoconazole is classified as a Group C, possible human carcinogen with a non-linear (MOE) approach for human risk characterization (CPRC Document, 7/27/94, Memo, P. V. Shah dated March 3, 2007, HED Doc. No. 0054532). The chronic dietary exposure assessment is protective of cancer effects.			

Point of Departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF<sub>A</sub> = extrapolation from animal to human (interspecies). UF<sub>H</sub> = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose.

## VI. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the aPAD or cPAD, respectively. The following paragraphs are summaries of the DEEM-FCID™ (ver. 2.03) acute and chronic exposure analyses.

Acute and chronic aggregate (food + water) analyses were performed using DEEM-FCID™ estimating the dietary exposure of the U.S. population and various population subgroups. The results are summarized in Tables 4 and 5 below for acute and chronic analyses respectively.

The resulting acute food exposure estimates were less than HED's level of concern (<100% aPAD) at the 95<sup>th</sup> percentile of the exposure distribution for general US population (7 % aPAD) and all population sub-groups; the most highly exposed population subgroup was Children 1-2 years old with 16 % aPAD. The resulting chronic food exposure estimates were less than HED's level of concern (<100% cPAD) for the general U.S. population (17 % cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 45 % cPAD. A cancer dietary assessment was not conducted for difenoconazole because the cancer NOAEL is higher than the chronic RfD; therefore, the chronic dietary risk estimate is more protective.

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**Table 4. Summary of Acute Dietary Exposure and Risk for Difenoconazole at the 95<sup>th</sup> Percentile.**

Population Subgroup	aPAD (mg/kg/day)	Exposure (mg/kg/day)	%aPAD
General U.S. Population	0.25	0.017747	7
All Infants (< 1 year old)		0.0255139	10
<b>Children 1-2 years old</b>		<b>0.039565</b>	<b>16</b>
Children 3-5 years old		0.031818	13
Children 6-12 years old		0.017949	7
Youth 13-19 years old		0.008828	4
Adults 20-49 years old		0.013083	5
Adults 50+ years old		0.017255	7
Females 13-49 years old		0.013281	5

The bolded %aPAD is the highest.

**Table 5. Summary of Chronic Dietary Exposure and Risk for Difenoconazole.**

Population Subgroup	cPAD (mg/kg/day)	Exposure (mg/kg/day)	%cPAD
General U.S. Population	0.01	0.001709	17
All Infants (< 1 year old)		0.002445	25
<b>Children 1-2 years old</b>		<b>0.004484</b>	<b>45</b>
Children 3-5 years old		0.003624	36
Children 6-12 years old		0.002061	21
Youth 13-19 years old		0.001372	14
Adults 20-49 years old		0.001376	14
Adults 50+ years old		0.001548	16
Females 13-49 years old		0.001402	14

The bolded %cPAD is the highest.

## VII. Characterization of Inputs/Outputs

The acute analysis assumed tolerance-level residues, 100% CT, and empirical or DEEM™ default processing factors. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, 100 % CT, and empirical or DEEM™ default processing factors. Therefore, these analyses are considered conservative. They do not warrant the need for further refinement at this time.

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## VIII. Conclusions

An acute aggregate (food + water) dietary risk assessment was conducted for difenoconazole using the DEEM-FCID™ (ver. 2.03) Model and assumed tolerance-level residues, 100% CT, and empirical or DEEM™ default processing factors. The chronic aggregate dietary risk assessment assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, 100 % CT, and empirical or DEEM™ default processing factors. The resulting acute and chronic aggregate exposure estimates were less than HED's level of concern. For the general U.S. population, the aPAD and cPAD were 7 % and 17 %, respectively. The most highly-exposed population subgroups in the acute (at the 95<sup>th</sup> percentile of the exposure distribution) and chronic analyses were Children 1-2 years old (16 % aPAD) and children 1-2 years old (45 % cPAD), respectively.

## IX. Attachments

- Attachment 1: DEEM-FCID™ Acute Residue File
- Attachment 2: DEEM-FCID™ Acute Exposure Estimates
- Attachment 3: DEEM-FCID™ Chronic Residue File
- Attachment 4: DEEM-FCID™ Chronic Exposure Estimates

cc with all attachments: T. Morton (RABIV)  
RDI: D. Dotson and J. Van Alstine - DESAC (7-Jan-2010); S. Hummel (21-Jan-2010)  
Petition Number(s): PP#8F7482  
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T. Morton:S10922:PY1:(703)305-6691

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### **Attachment 1: DEEM-FCID™ Acute Residue File**

Filename: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847 DifenocozoleNew Uses of Wax Apple and Mango\difenoconazole\_acute-01-10.R98

Chemical: Difenoconazole

RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day

RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day

Date created/last modified: 01-12-2010/10:30:55/8

Program ver. 2.03

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj. Factors #1	Comment #2
95000230	O	Banana	0.200000	1.000	1.000
95000231	O	Banana-babyfood	0.200000	1.000	1.000
95000240	O	Banana, dried	0.200000	3.900	1.000
95000241	O	Banana, dried-babyfood	0.200000	3.900	1.000
95001280	O	Cottonseed, oil	0.050000	1.000	1.000
95001281	O	Cottonseed, oil-babyfood	0.050000	1.000	1.000
95001750	O	Grape	4.000000	1.000	1.000
95001760	O	Grape, juice	4.000000	0.200	1.000
95001761	O	Grape, juice-babyfood	4.000000	0.200	1.000
95001770	O	Grape, leaves	4.000000	1.000	1.000
95001780	O	Grape, raisin	6.000000	1.000	1.000
95001790	O	Grape, wine and sherry	4.000000	1.000	1.000
95002150	O	Mango	0.070000	1.000	1.000
95002151	O	Mango-babyfood	0.070000	1.000	1.000
95002160	O	Mango, dried	0.070000	1.000	1.000
95002170	O	Mango, juice	0.070000	1.000	1.000
95002171	O	Mango, juice-babyfood	0.070000	1.000	1.000
95002450	O	Papaya	0.300000	1.000	1.000
95002451	O	Papaya-babyfood	0.300000	1.000	1.000
95002460	O	Papaya, dried	0.300000	1.800	1.000
95002470	O	Papaya, juice	0.300000	1.500	1.000
95002830	O	Plantain	0.200000	1.000	1.000
95002840	O	Plantain, dried	0.200000	3.900	1.000
86010000	O	Water, direct, all sources	0.015800	1.000	1.000
86020000	O	Water, indirect, all sources	0.015800	1.000	1.000
21000440	M	Beef, meat	0.050000	1.000	1.000
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000
21000450	M	Beef, meat, dried	0.050000	1.920	1.000
21000460	M	Beef, meat byproducts	0.100000	1.000	1.000
21000461	M	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
21000470	M	Beef, fat	0.100000	1.000	1.000
21000471	M	Beef,fat-babyfood	0.100000	1.000	1.000
21000480	M	Beef, kidney	0.100000	1.000	1.000
21000490	M	Beef, liver	0.200000	1.000	1.000
21000491	M	Beef, liver-babyfood	0.200000	1.000	1.000
23001690	M	Goat, meat	0.050000	1.000	1.000
23001700	M	Goat, meat byproducts	0.100000	1.000	1.000
23001710	M	Goat, fat	0.100000	1.000	1.000
23001720	M	Goat, kidney	0.100000	1.000	1.000
23001730	M	Goat, liver	0.200000	1.000	1.000
24001890	M	Horse, meat	0.050000	1.000	1.000
25002900	M	Pork, meat	0.050000	1.000	1.000
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000
25002910	M	Pork, skin	0.100000	1.000	1.000
25002920	M	Pork, meat byproducts	0.100000	1.000	1.000
25002921	M	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
25002930	M	Pork, fat	0.100000	1.000	1.000
25002931	M	Pork, fat-babyfood	0.100000	1.000	1.000
25002940	M	Pork, kidney	0.100000	1.000	1.000
25002950	M	Pork, liver	0.200000	1.000	1.000
26003390	M	Sheep, meat	0.050000	1.000	1.000
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000
26003400	M	Sheep, meat byproducts	0.100000	1.000	1.000
26003410	M	Sheep, fat	0.100000	1.000	1.000
26003411	M	Sheep, fat-babyfood	0.100000	1.000	1.000
26003420	M	Sheep, kidney	0.100000	1.000	1.000
26003430	M	Sheep, liver	0.200000	1.000	1.000
70001450	P	Egg, whole	0.100000	1.000	1.000
70001451	P	Egg, whole-babyfood	0.100000	1.000	1.000
70001460	P	Egg, white	0.100000	1.000	1.000
70001461	P	Egg, white (solids)-babyfood	0.100000	1.000	1.000
70001470	P	Egg, yolk	0.100000	1.000	1.000
70001471	P	Egg, yolk-babyfood	0.100000	1.000	1.000

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27002220 D	Milk, fat	0.010000	1.000	1.000
27002221 D	Milk, fat - baby food/infant for	0.010000	1.000	1.000
27012230 D	Milk, nonfat solids	0.010000	1.000	1.000
27012231 D	Milk, nonfat solids-baby food/in	0.010000	1.000	1.000
27022240 D	Milk, water	0.010000	1.000	1.000
27022241 D	Milk, water-babyfood/infant form	0.010000	1.000	1.000
27032251 D	Milk, sugar (lactose)-baby food/	0.010000	1.000	1.000
01010520 1A	Beet, sugar	0.300000	1.000	1.000
01010521 1A	Beet, sugar-babyfood	0.300000	1.000	1.000
01010530 1A	Beet, sugar, molasses	0.300000	0.600	1.000
01010531 1A	Beet, sugar, molasses-babyfood	0.300000	0.600	1.000
01032960 1C	Potato, chips	0.010000	0.500	1.000
01032970 1C	Potato, dry (granules/ flakes)	0.010000	0.500	1.000
01032971 1C	Potato, dry (granules/ flakes)-b	0.010000	0.500	1.000
01032980 1C	Potato, flour	0.010000	0.500	1.000
01032981 1C	Potato, flour-babyfood	0.010000	0.500	1.000
01032990 1C	Potato, tuber, w/peel	0.010000	1.000	1.000
01032991 1C	Potato, tuber, w/peel-babyfood	0.010000	1.000	1.000
01033000 1C	Potato, tuber, w/o peel	0.010000	1.000	1.000
01033001 1C	Potato, tuber, w/o peel-babyfood	0.010000	1.000	1.000
03001640 3	Garlic	0.200000	1.000	1.000
03001650 3	Garlic, dried	0.200000	1.000	1.000
03001651 3	Garlic, dried-babyfood	0.200000	1.000	1.000
03001980 3	Leek	6.000000	1.000	1.000
03002370 3	Onion, dry bulb	0.200000	1.000	1.000
03002371 3	Onion, dry bulb-babyfood	0.200000	1.000	1.000
03002380 3	Onion, dry bulb, dried	0.200000	9.000	1.000
03002381 3	Onion, dry bulb, dried-babyfood	0.200000	9.000	1.000
03002390 3	Onion, green	6.000000	1.000	1.000
03003380 3	Shallot	0.200000	1.000	1.000
05010610 5A	Broccoli	1.900000	1.000	1.000
05010611 5A	Broccoli-babyfood	1.900000	1.000	1.000
05010620 5A	Broccoli, Chinese	1.900000	1.000	1.000
05020630 5B	Broccoli raab	35.000000	1.000	1.000
05010640 5A	Brussels sprouts	1.900000	1.000	1.000
05010690 5A	Cabbage	1.900000	1.000	1.000
05020700 5B	Cabbage, Chinese, bok choy	35.000000	1.000	1.000
05010710 5A	Cabbage, Chinese, napa	1.900000	1.000	1.000
05010720 5A	Cabbage, Chinese, mustard	1.900000	1.000	1.000
05010830 5A	Cauliflower	1.900000	1.000	1.000
05021170 5B	Collards	35.000000	1.000	1.000
05021940 5B	Kale	35.000000	1.000	1.000
05011960 5A	Kohlrabi	1.900000	1.000	1.000
05022290 5B	Mustard greens	35.000000	1.000	1.000
05023180 5B	Rape greens	35.000000	1.000	1.000
05023890 5B	Turnip, greens	35.000000	1.000	1.000
08001480 8	Eggplant	0.600000	1.000	1.000
08002340 8	Okra	0.600000	1.000	1.000
08002700 8	Pepper, bell	0.600000	1.000	1.000
08002701 8	Pepper, bell-babyfood	0.600000	1.000	1.000
08002710 8	Pepper, bell, dried	0.600000	1.000	1.000
08002711 8	Pepper, bell, dried-babyfood	0.600000	1.000	1.000
08002720 8	Pepper, nonbell	0.600000	1.000	1.000
08002721 8	Pepper, nonbell-babyfood	0.600000	1.000	1.000
08002730 8	Pepper, nonbell, dried	0.600000	1.000	1.000
08003740 8	Tomatillo	0.600000	1.000	1.000
08003750 8	Tomato	0.600000	1.000	1.000
08003751 8	Tomato-babyfood	0.600000	1.000	1.000
08003760 8	Tomato, paste	0.600000	1.600	1.000
08003761 8	Tomato, paste-babyfood	0.600000	1.600	1.000
08003770 8	Tomato, puree	0.600000	0.500	1.000
08003771 8	Tomato, puree-babyfood	0.600000	0.500	1.000
08003780 8	Tomato, dried	0.600000	14.300	1.000
08003781 8	Tomato, dried-babyfood	0.600000	14.300	1.000
08003790 8	Tomato, juice	0.600000	1.500	1.000
09020210 9B	Balsam pear	0.700000	1.000	1.000
09010750 9A	Cantaloupe	0.700000	1.000	1.000
09010800 9A	Casaba	0.700000	1.000	1.000
09020880 9B	Chayote, fruit	0.700000	1.000	1.000
09021020 9B	Chinese waxgourd	0.700000	1.000	1.000
09021350 9B	Cucumber	0.700000	1.000	1.000
09011870 9A	Honeydew melon	0.700000	1.000	1.000
09023080 9B	Pumpkin	0.700000	1.000	1.000
09023090 9B	Pumpkin, seed	0.700000	1.000	1.000
09023560 9B	Squash, summer	0.700000	1.000	1.000
09023561 9B	Squash, summer-babyfood	0.700000	1.000	1.000
09023570 9B	Squash, winter	0.700000	1.000	1.000

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09023571 9B	Squash, winter-babyfood	0.700000	1.000	1.000
09013990 9A	Watermelon	0.700000	1.000	1.000
09014000 9A	Watermelon, juice	0.700000	1.000	1.000
10001060 10	Citrus citron	0.600000	1.000	1.000
10001070 10	Citrus hybrids	0.600000	1.000	1.000
10001080 10	Citrus, oil	25.000000	1.000	1.000
10001800 10	Grapefruit	0.600000	1.000	1.000
10001810 10	Grapefruit, juice	0.600000	0.100	1.000
10001970 10	Kumquat	0.600000	1.000	1.000
10001990 10	Lemon	0.600000	1.000	1.000
10002000 10	Lemon, juice	0.600000	0.100	1.000
10002001 10	Lemon, juice-babyfood	0.600000	0.100	1.000
10002010 10	Lemon, peel	0.600000	1.000	1.000
10002060 10	Lime	0.600000	1.000	1.000
10002070 10	Lime, juice	0.600000	0.100	1.000
10002071 10	Lime, juice-babyfood	0.600000	0.100	1.000
10002400 10	Orange	0.600000	1.000	1.000
10002410 10	Orange, juice	0.600000	0.100	1.000
10002411 10	Orange, juice-babyfood	0.600000	0.100	1.000
10002420 10	Orange, peel	0.600000	1.000	1.000
10003070 10	Pummelo	0.600000	1.000	1.000
10003690 10	Tangerine	0.600000	1.000	1.000
10003700 10	Tangerine, juice	0.600000	0.100	1.000
11000070 11	Apple, fruit with peel	1.000000	1.000	1.000
11000080 11	Apple, peeled fruit	1.000000	1.000	1.000
11000081 11	Apple, peeled fruit-babyfood	1.000000	1.000	1.000
11000090 11	Apple, dried	1.000000	8.000	1.000
11000091 11	Apple, dried-babyfood	1.000000	8.000	1.000
11000100 11	Apple, juice	1.000000	0.040	1.000
11000101 11	Apple, juice-babyfood	1.000000	0.040	1.000
11000110 11	Apple, sauce	1.000000	1.000	1.000
11000111 11	Apple, sauce-babyfood	1.000000	1.000	1.000
11001290 11	Crabapple	1.000000	1.000	1.000
11002100 11	Loquat	1.000000	1.000	1.000
11002660 11	Pear	1.000000	1.000	1.000
11002661 11	Pear-babyfood	1.000000	1.000	1.000
11002670 11	Pear, dried	1.000000	6.250	1.000
11002680 11	Pear, juice	1.000000	1.000	1.000
11002681 11	Pear, juice-babyfood	1.000000	1.000	1.000
11003100 11	Quince	1.000000	1.000	1.000
14000030 14	Almond	0.030000	1.000	1.000
14000031 14	Almond-babyfood	0.030000	1.000	1.000
14000040 14	Almond, oil	0.030000	1.000	1.000
14000041 14	Almond, oil-babyfood	0.030000	1.000	1.000
14000590 14	Brazil nut	0.030000	1.000	1.000
14000680 14	Butternut	0.030000	1.000	1.000
14000810 14	Cashew	0.030000	1.000	1.000
14000920 14	Chestnut	0.030000	1.000	1.000
14001550 14	Filbert	0.030000	1.000	1.000
14001560 14	Filbert, oil	0.030000	1.000	1.000
14001850 14	Hickory nut	0.030000	1.000	1.000
14002130 14	Macadamia nut	0.030000	1.000	1.000
14002690 14	Pecan	0.030000	1.000	1.000
14002820 14	Pistachio	0.030000	1.000	1.000
14003910 14	Walnut	0.030000	1.000	1.000
15000250 15	Barley, pearled barley	0.100000	1.000	1.000
15000251 15	Barley, pearled barley-babyfood	0.100000	1.000	1.000
15000260 15	Barley, flour	0.100000	1.000	1.000
15000261 15	Barley, flour-babyfood	0.100000	1.000	1.000
15000270 15	Barley, bran	0.100000	1.000	1.000
15001270 15	Corn, sweet	0.010000	1.000	1.000
15001271 15	Corn, sweet-babyfood	0.010000	1.000	1.000
15003280 15	Rye, grain	0.100000	1.000	1.000
15003290 15	Rye, flour	0.100000	1.000	1.000
15004010 15	Wheat, grain	0.100000	1.000	1.000
15004011 15	Wheat, grain-babyfood	0.100000	1.000	1.000
15004020 15	Wheat, flour	0.100000	1.000	1.000
15004021 15	Wheat, flour-babyfood	0.100000	1.000	1.000
15004030 15	Wheat, germ	0.100000	1.000	1.000
15004040 15	Wheat, bran	0.100000	1.000	1.000

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**Attachment 2: DEEM-FCID™ Acute Exposure Estimates**

U.S. Environmental Protection Agency Ver. 2.02  
DEEM-FCID ACUTE Analysis for DIFENOCONAZOLE (1994-98 data)  
Residue file: difenoconazole\_acute-01-10.R98 Adjustment factor #2 used.  
Analysis Date: 01-12-2010/14:29:03 Residue file dated: 01-12-2010/14:23:34/8  
Daily totals for food and foodform consumption used.  
Run Comment: ""  
=====

Summary calculations (per capita):

	95th Percentile Exposure	% aRfD	99th Percentile Exposure	% aRfD	99.9th Percentile Exposure	% aRfD
U.S. Population:	0.017747	7.10	0.051415	20.57	0.142474	56.99
All infants:	0.025139	10.06	0.040570	16.23	0.118410	47.36
Children 1-2 yrs:	0.039565	15.83	0.087361	34.94	0.251716	100.69
Children 3-5 yrs:	0.031818	12.73	0.070329	28.13	0.373423	149.37
Children 6-12 yrs:	0.017949	7.18	0.038892	15.56	0.148702	59.48
Youth 13-19 yrs:	0.008828	3.53	0.039549	15.82	0.137882	55.15
Adults 20-49 yrs:	0.013083	5.23	0.041933	16.77	0.109522	43.81
Adults 50+ yrs:	0.017255	6.90	0.062629	25.05	0.138639	55.46
Females 13-49 yrs:	0.013281	5.31	0.042028	16.81	0.116292	46.52

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### Attachment 3: DEEM-FCID™ Chronic Residue File

Filename: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847  
 DifenocoazoleNew Uses of Wax Apple and Mango\difenoconazole\_chronic-01-10AverageFT.R98  
 Chemical: Difenoconazole  
 RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day  
 RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day  
 Date created/last modified: 01-12-2010/10:31:20/8 Program ver. 2.03

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj. Factors #1	Comment #2
95000230	O	Banana	0.200000	1.000	1.000
95000231	O	Banana-babyfood	0.200000	1.000	1.000
95000240	O	Banana, dried	0.200000	3.900	1.000
95000241	O	Banana, dried-babyfood	0.200000	3.900	1.000
95001280	O	Cottonseed, oil	0.050000	1.000	1.000
95001281	O	Cottonseed, oil-babyfood	0.050000	1.000	1.000
95001750	O	Grape	0.613000	1.000	1.000
95001760	O	Grape, juice	0.613000	0.200	1.000
95001761	O	Grape, juice-babyfood	0.613000	0.200	1.000
95001770	O	Grape, leaves	0.613000	1.000	1.000
95001780	O	Grape, raisin	0.613000	3.500	1.000
95001790	O	Grape, wine and sherry	0.613000	1.000	1.000
95002150	O	Mango	0.070000	1.000	1.000
95002151	O	Mango-babyfood	0.070000	1.000	1.000
95002160	O	Mango, dried	0.070000	1.000	1.000
95002170	O	Mango, juice	0.070000	1.000	1.000
95002171	O	Mango, juice-babyfood	0.070000	1.000	1.000
95002450	O	Papaya	0.300000	1.000	1.000
95002451	O	Papaya-babyfood	0.300000	1.000	1.000
95002460	O	Papaya, dried	0.300000	1.800	1.000
95002470	O	Papaya, juice	0.300000	1.500	1.000
95002830	O	Plantain	0.200000	1.000	1.000
95002840	O	Plantain, dried	0.200000	3.900	1.000
86010000	O	Water, direct, all sources	0.010400	1.000	1.000
86020000	O	Water, indirect, all sources	0.010400	1.000	1.000
21000440	M	Beef, meat	0.050000	1.000	1.000
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000
21000450	M	Beef, meat, dried	0.050000	1.920	1.000
21000460	M	Beef, meat byproducts	0.100000	1.000	1.000
21000461	M	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
21000470	M	Beef, fat	0.100000	1.000	1.000
21000471	M	Beef,fat-babyfood	0.100000	1.000	1.000
21000480	M	Beef, kidney	0.100000	1.000	1.000
21000490	M	Beef, liver	0.200000	1.000	1.000
21000491	M	Beef, liver-babyfood	0.200000	1.000	1.000
23001690	M	Goat, meat	0.050000	1.000	1.000
23001700	M	Goat, meat byproducts	0.100000	1.000	1.000
23001710	M	Goat, fat	0.100000	1.000	1.000
23001720	M	Goat, kidney	0.100000	1.000	1.000
23001730	M	Goat, liver	0.200000	1.000	1.000
24001890	M	Horse, meat	0.050000	1.000	1.000
25002900	M	Pork, meat	0.050000	1.000	1.000
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000
25002910	M	Pork, skin	0.100000	1.000	1.000
25002920	M	Pork, meat byproducts	0.100000	1.000	1.000
25002921	M	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
25002930	M	Pork, fat	0.100000	1.000	1.000
25002931	M	Pork, fat-babyfood	0.100000	1.000	1.000
25002940	M	Pork, kidney	0.100000	1.000	1.000
25002950	M	Pork, liver	0.200000	1.000	1.000
26003390	M	Sheep, meat	0.050000	1.000	1.000
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000
26003400	M	Sheep, meat byproducts	0.100000	1.000	1.000
26003410	M	Sheep, fat	0.100000	1.000	1.000
26003411	M	Sheep, fat-babyfood	0.100000	1.000	1.000
26003420	M	Sheep, kidney	0.100000	1.000	1.000
26003430	M	Sheep, liver	0.200000	1.000	1.000
70001450	P	Egg, whole	0.100000	1.000	1.000
70001451	P	Egg, whole-babyfood	0.100000	1.000	1.000
70001460	P	Egg, white	0.100000	1.000	1.000
70001461	P	Egg, white (solids)-babyfood	0.100000	1.000	1.000
70001470	P	Egg, yolk	0.100000	1.000	1.000
70001471	P	Egg, yolk-babyfood	0.100000	1.000	1.000

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27002220 D	Milk, fat	0.010000	1.000	1.000
27002221 D	Milk, fat - baby food/infant for	0.010000	1.000	1.000
27012230 D	Milk, nonfat solids	0.010000	1.000	1.000
27012231 D	Milk, nonfat solids-baby food/in	0.010000	1.000	1.000
27022240 D	Milk, water	0.010000	1.000	1.000
27022241 D	Milk, water-babyfood/infant form	0.010000	1.000	1.000
27032251 D	Milk, sugar (lactose)-baby food/	0.010000	1.000	1.000
01010520 1A	Beet, sugar	0.300000	1.000	1.000
01010521 1A	Beet, sugar-babyfood	0.300000	1.000	1.000
01010530 1A	Beet, sugar, molasses	0.300000	0.600	1.000
01010531 1A	Beet, sugar, molasses-babyfood	0.300000	0.600	1.000
01032960 1C	Potato, chips	0.005000	0.500	1.000
01032970 1C	Potato, dry (granules/ flakes)	0.005000	0.500	1.000
01032971 1C	Potato, dry (granules/ flakes)-b	0.005000	0.500	1.000
01032980 1C	Potato, flour	0.005000	0.500	1.000
01032981 1C	Potato, flour-babyfood	0.005000	0.500	1.000
01032990 1C	Potato, tuber, w/peel	0.005000	1.000	1.000
01032991 1C	Potato, tuber, w/peel-babyfood	0.005000	1.000	1.000
01033000 1C	Potato, tuber, w/o peel	0.005000	1.000	1.000
01033001 1C	Potato, tuber, w/o peel-babyfood	0.005000	1.000	1.000
03001640 3	Garlic	0.200000	1.000	1.000
03001650 3	Garlic, dried	0.200000	1.000	1.000
03001651 3	Garlic, dried-babyfood	0.200000	1.000	1.000
03001980 3	Leek	6.000000	1.000	1.000
03002370 3	Onion, dry bulb	0.200000	1.000	1.000
03002371 3	Onion, dry bulb-babyfood	0.200000	1.000	1.000
03002380 3	Onion, dry bulb, dried	0.200000	9.000	1.000
03002381 3	Onion, dry bulb, dried-babyfood	0.200000	9.000	1.000
03002390 3	Onion, green	6.000000	1.000	1.000
03003380 3	Shallot	0.200000	1.000	1.000
05010610 5A	Broccoli	0.221000	1.000	1.000
05010611 5A	Broccoli-babyfood	0.221000	1.000	1.000
05010620 5A	Broccoli, Chinese	0.221000	1.000	1.000
05020630 5B	Broccoli raab	5.100000	1.000	1.000
05010640 5A	Brussels sprouts	29.000000	1.000	1.000
05010690 5A	Cabbage	0.029000	1.000	1.000
05020700 5B	Cabbage, Chinese, bok choy	5.100000	1.000	1.000
05010710 5A	Cabbage, Chinese, napa	0.029000	1.000	1.000
05010720 5A	Cabbage, Chinese, mustard	0.221000	1.000	1.000
05010830 5A	Cauliflower	0.221000	1.000	1.000
05021170 5B	Collards	5.100000	1.000	1.000
05021940 5B	Kale	5.100000	1.000	1.000
05011960 5A	Kohlrabi	0.029000	1.000	1.000
05022290 5B	Mustard greens	5.100000	1.000	1.000
05023180 5B	Rape greens	5.100000	1.000	1.000
05023890 5B	Turnip, greens	5.100000	1.000	1.000
08001480 8	Eggplant	0.133000	1.000	1.000
08002340 8	Okra	0.600000	1.000	1.000
08002700 8	Pepper, bell	0.133000	1.000	1.000
08002701 8	Pepper, bell-babyfood	0.133000	1.000	1.000
08002710 8	Pepper, bell, dried	0.133000	1.000	1.000
08002711 8	Pepper, bell, dried-babyfood	0.133000	1.000	1.000
08002720 8	Pepper, nonbell	0.133000	1.000	1.000
08002721 8	Pepper, nonbell-babyfood	0.133000	1.000	1.000
08002730 8	Pepper, nonbell, dried	0.133000	1.000	1.000
08003740 8	Tomatillo	0.165000	1.000	1.000
08003750 8	Tomato	0.165000	1.000	1.000
08003751 8	Tomato-babyfood	0.165000	1.000	1.000
08003760 8	Tomato, paste	0.165000	1.600	1.000
08003761 8	Tomato, paste-babyfood	0.165000	1.600	1.000
08003770 8	Tomato, puree	0.165000	0.500	1.000
08003771 8	Tomato, puree-babyfood	0.165000	0.500	1.000
08003780 8	Tomato, dried	0.165000	14.300	1.000
08003781 8	Tomato, dried-babyfood	0.165000	14.300	1.000
08003790 8	Tomato, juice	0.165000	1.500	1.000
09020210 9B	Balsam pear	0.055000	1.000	1.000
09010750 9A	Cantaloupe	0.137000	1.000	1.000
09010800 9A	Casaba	0.137000	1.000	1.000
09020880 9B	Chayote, fruit	0.310000	1.000	1.000
09021020 9B	Chinese waxgourd	0.055000	1.000	1.000
09021350 9B	Cucumber	0.055000	1.000	1.000
09011870 9A	Honeydew melon	0.137000	1.000	1.000
09023080 9B	Pumpkin	0.031000	1.000	1.000
09023090 9B	Pumpkin, seed	0.031000	1.000	1.000
09023560 9B	Squash, summer	0.031000	1.000	1.000
09023561 9B	Squash, summer-babyfood	0.031000	1.000	1.000
09023570 9B	Squash, winter	0.031000	1.000	1.000

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09023571	9B	Squash, winter-babyfood	0.031000	1.000	1.000
09013990	9A	Watermelon	0.137000	1.000	1.000
09014000	9A	Watermelon, juice	0.137000	1.000	1.000
10001060	10	Citrus citron	0.208000	1.000	1.000
10001070	10	Citrus hybrids	0.208000	1.000	1.000
10001080	10	Citrus, oil	25.000000	1.000	1.000
10001800	10	Grapefruit	0.120000	1.000	1.000
10001810	10	Grapefruit, juice	0.120000	0.100	1.000
10001970	10	Kumquat	0.208000	1.000	1.000
10001990	10	Lemon	0.176000	1.000	1.000
10002000	10	Lemon, juice	0.176000	0.100	1.000
10002001	10	Lemon, juice-babyfood	0.176000	0.100	1.000
10002010	10	Lemon, peel	0.176000	1.000	1.000
10002060	10	Lime	0.176000	1.000	1.000
10002070	10	Lime, juice	0.176000	0.100	1.000
10002071	10	Lime, juice-babyfood	0.176000	0.100	1.000
10002400	10	Orange	0.208000	1.000	1.000
10002410	10	Orange, juice	0.208000	0.100	1.000
10002411	10	Orange, juice-babyfood	0.208000	0.100	1.000
10002420	10	Orange, peel	0.208000	1.000	1.000
10003070	10	Pummelo	0.120000	1.000	1.000
10003690	10	Tangerine	0.208000	1.000	1.000
10003700	10	Tangerine, juice	0.208000	0.100	1.000
11000070	11	Apple, fruit with peel	0.203000	1.000	1.000
11000080	11	Apple, peeled fruit	0.203000	1.000	1.000
11000081	11	Apple, peeled fruit-babyfood	0.203000	1.000	1.000
11000090	11	Apple, dried	0.203000	8.000	1.000
11000091	11	Apple, dried-babyfood	0.203000	8.000	1.000
11000100	11	Apple, juice	0.203000	0.040	1.000
11000101	11	Apple, juice-babyfood	0.203000	0.040	1.000
11000110	11	Apple, sauce	0.203000	1.000	1.000
11000111	11	Apple, sauce-babyfood	0.203000	1.000	1.000
11001290	11	Crabapple	0.203000	1.000	1.000
11002100	11	Loquat	0.123000	1.000	1.000
11002660	11	Pear	0.123000	1.000	1.000
11002661	11	Pear-babyfood	0.123000	1.000	1.000
11002670	11	Pear, dried	0.123000	6.250	1.000
11002680	11	Pear, juice	0.123000	1.000	1.000
11002681	11	Pear, juice-babyfood	0.123000	1.000	1.000
11003100	11	Quince	0.123000	1.000	1.000
14000030	14	Almond	0.005000	1.000	1.000
14000031	14	Almond-babyfood	0.005000	1.000	1.000
14000040	14	Almond, oil	0.005000	1.000	1.000
14000041	14	Almond, oil-babyfood	0.005000	1.000	1.000
14000590	14	Brazil nut	0.007000	1.000	1.000
14000680	14	Butternut	0.007000	1.000	1.000
14000810	14	Cashew	0.007000	1.000	1.000
14000920	14	Chestnut	0.005000	1.000	1.000
14001550	14	Filbert	0.007000	1.000	1.000
14001560	14	Filbert, oil	0.007000	1.000	1.000
14001850	14	Hickory nut	0.007000	1.000	1.000
14002130	14	Macadamia nut	0.007000	1.000	1.000
14002690	14	Pecan	0.007000	1.000	1.000
14002820	14	Pistachio	0.005000	1.000	1.000
14003910	14	Walnut	0.007000	1.000	1.000
15000250	15	Barley, pearled barley	0.100000	1.000	1.000
15000251	15	Barley, pearled barley-babyfood	0.100000	1.000	1.000
15000260	15	Barley, flour	0.100000	1.000	1.000
15000261	15	Barley, flour-babyfood	0.100000	1.000	1.000
15000270	15	Barley, bran	0.100000	1.000	1.000
15001270	15	Corn, sweet	0.010000	1.000	1.000
15001271	15	Corn, sweet-babyfood	0.010000	1.000	1.000
15003280	15	Rye, grain	0.100000	1.000	1.000
15003290	15	Rye, flour	0.100000	1.000	1.000
15004010	15	Wheat, grain	0.100000	1.000	1.000
15004011	15	Wheat, grain-babyfood	0.100000	1.000	1.000
15004020	15	Wheat, flour	0.100000	1.000	1.000
15004021	15	Wheat, flour-babyfood	0.100000	1.000	1.000
15004030	15	Wheat, germ	0.100000	1.000	1.000
15004040	15	Wheat, bran	0.100000	1.000	1.000

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**Attachment 4: DEEM-FCID™ Chronic Exposure Estimates**

U.S. Environmental Protection Agency Ver. 2.00  
DEEM-FCID Chronic analysis for DIFENOCONAZOLE (1994-98 data)  
Residue file name: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847  
DifenocoazoleNew Uses of Wax Apple and Mango\difenoconazole\_chronic-01-10AverageFT.R98  
Adjustment factor #2 used.  
Analysis Date 01-12-2010/14:26:21 Residue file dated: 01-12-2010/14:24:16/8  
Reference dose (RfD, Chronic) = .01 mg/kg bw/day  
=====  
Total exposure by population subgroup  
=====

Population Subgroup	mg/kg body wt/day	Total Exposure Percent of Rfd
U.S. Population (total)	0.001709	17.1%
U.S. Population (spring season)	0.001689	16.9%
U.S. Population (summer season)	0.001761	17.6%
U.S. Population (autumn season)	0.001678	16.8%
U.S. Population (winter season)	0.001710	17.1%
Northeast region	0.001653	16.5%
Midwest region	0.001671	16.7%
Southern region	0.001610	16.1%
Western region	0.001958	19.6%
Hispanics	0.001635	16.3%
Non-hispanic whites	0.001626	16.3%
Non-hispanic blacks	0.002000	20.0%
Non-hisp/non-white/non-black	0.002426	24.3%
All infants (< 1 year)	0.002445	24.5%
Nursing infants	0.001287	12.9%
Non-nursing infants	0.002885	28.9%
Children 1-6 yrs	0.003762	37.6%
Children 7-12 yrs	0.001941	19.4%
Females 13-19 (not preg or nursing)	0.001233	12.3%
Females 20+ (not preg or nursing)	0.001490	14.9%
Females 13-50 yrs	0.001475	14.7%
Females 13+ (preg/not nursing)	0.001295	13.0%
Females 13+ (nursing)	0.001522	15.2%
Males 13-19 yrs	0.001506	15.1%
Males 20+ yrs	0.001385	13.9%
Seniors 55+	0.001574	15.7%
Children 1-2 yrs	0.004484	44.8%
Children 3-5 yrs	0.003624	36.2%
Children 6-12 yrs	0.002061	20.6%
Youth 13-19 yrs	0.001372	13.7%
Adults 20-49 yrs	0.001376	13.8%
Adults 50+ yrs	0.001548	15.5%
Females 13-49 yrs	0.001402	14.0%



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# R180719

**Chemical Name:** Difenoconazole

**PC Code:** 128847

**HED File Code:** 12000 Exposure Reviews

**Memo Date:** 1/21/2010

**File ID:** 00000000

**Accession #:** 000-00-0134

**HED Records Reference Center**  
**2/5/2010**